

REMARKS

Applicants thank the Examiner for acknowledging the previously filed Request for Continued Examination (RCE), and subsequent withdrawal of the finality of the previous Office action and entry of Applicants' submission filed on January 3, 2008. Applicants further thank the Examiner for noting that claim 2 was previously canceled (in contrast to Applicant's remarks in the previous Office action.)

In response to the Final Office Action mailed February 21, 2008, Applicants respectfully request reconsideration based on the amendments and following remarks contained herein. Applicants respectfully submit that the claims as presented herein are in condition for allowance.

Claims 1, 4-6 and 15 are pending in the present application. Claims 1 and 15 have been amended while new claim 20 has been added. No new matter has been added by the amendments or new claim. Applicants respectfully request reconsideration of claims 1, 4-6, 15 and 20 based upon the amendments and at least the following remarks.

Claim Rejections Under 35 U.S.C. § 103

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art and that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

Claims 1 and 4-6 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Rotzoll (U.S. Patent No. 6,806,458, hereinafter "Rotzoll") in view of Bock (U.S. Patent No. 6,707,410, hereinafter "Bock"). The Examiner states that Rotzoll discloses all of the elements of the abovementioned claims except, *a switch*, which the Examiner further states is disclosed primarily in FIG. 3, column 1, line 54- column 2, line 8, column 3, lines 61-64 and column 9, lines 49-58. Applicants respectfully traverse for at least the following reasons.

Applicants respectfully note that Rotzoll discloses a comparator which receives integrated voltage outputs $V1(t)$ and $V2(t)$ from photodiodes 1000 disposed in pixels 420 (FIGS. 4, 6A, 6B and 7), based on the start of an integration period, and outputs a comparison result directly to a processing means 420 (FIG. 4). More specifically, the device of Rotzoll integrates analog output voltages $V1(t)$ and $V2(t)$ for a predetermined period of time, based on a desired scaling factor K , to subsequently output a signal (corresponding to a detected edge) from the comparator to a processor in response to the end of the integration period. After outputting the signal to the processor, a subsequent integration period starts, at which time voltage outputs $V1(t)$ and $V2(t)$ are again applied to the comparator. (See, e.g., column 10, line 37 to column 11, line 38 and FIGS. 7 and 8 of Rotzoll).

In contrast an in accordance with the present invention, the comparator 1122 maintains the 1-bit digital signal (COMO12) until the next shutter control signal (CSH) is applied, thereby eliminating a need for a separate and additional shutter structure in the present invention, as disclosed in amended independent claim 1 (and in similarly-amended independent claim 15, as well as new claim 20), and described at least at page 12, lines 11-14 and shown in FIGS. 2, 3 and 5 of the instant application as filed.

Thus, neither Rotzoll nor Bock, alone or in combination, teach or suggest *a photocell which receives light in response to a first shutter control signal [or] a latch type comparator which compares the analog signal of the photocell and an analog signal of a photocell of an adjacent pixel, generates a 1-bit digital signal having a value of the comparison and maintains the 1-bit digital signal generated by the comparison until a second shutter control signal subsequent to the first shutter control signal is received*, as disclosed in amended independent claim 1.

Therefore, it is respectfully submitted that independent claim 1, including claims depending therefrom, i.e., claims 4-6, define over the cited references.

Accordingly, it is respectfully submitted that the rejection of claims 1 and 4-6 under 35 U.S.C. § 103(a) be withdrawn.

Claim 15 stands rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Rotzoll in view of Bock and further in view of Arias-Estrada (U.S. Patent No. 6,253,161,

hereinafter “Estrada”). The Examiner states that Rotzoll in view of Bock discloses all of the elements of claim 15 except, *a pixel select signal or a shutter control signal*, which the Examiner further states is disclosed primarily in column 9, lines 20-34 of Estrada. Applicants respectfully traverse for at least the following reasons.

As described above with reference to claim 1, Rotzoll, Bock and/or Estrada, alone or in any combination thereof, fail to teach or suggest that the photocell receives or that comparator 1122 maintains the 1-bit digital signal (COMO12) until the next shutter control signal (CSH) is applied, thereby eliminating a need for a separate and additional shutter structure in the present invention, as disclosed in amended independent claim 15, described at least at page 12, lines 11-14 and shown in FIGS. 2, 3 and 5 of the instant application as filed.

Therefore, neither Rotzoll nor Bock nor Estrada, alone or in any combination thereof, teach or suggest *a photocell which receives light in response to a first shutter control signal [or] a latch type comparator which compares the analog signal of the photocell and an analog signal of a photocell of an adjacent pixel, generates a 1-bit digital signal having a value of the comparison and **maintains** the 1-bit digital signal generated by the comparison **until a second shutter control signal subsequent to the first shutter control signal is received***, as disclosed in amended independent claim 15.

Thus, it is respectfully submitted that claim 15 defines over the cited references.

Accordingly, it is respectfully submitted that the rejection of claim 15 under 35 U.S.C. § 103(a) be withdrawn.

Conclusion

In view of the foregoing remarks distinguishing the prior art of record, Applicant submits that this application is in condition for allowance. Early notification to this effect is requested. The Examiner is invited to contact Applicant's Attorneys at the below-listed telephone number regarding this Amendment or otherwise regarding the present application in order to address any questions or remaining issues concerning the same. If there are any charges due in connection with this response, please charge them to Deposit Account 06-1130.

Respectfully submitted,

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